№ 60

DEADLY INTUBATION IN EXTENSIVE MASSIVE PULMONARY EMBOLISM

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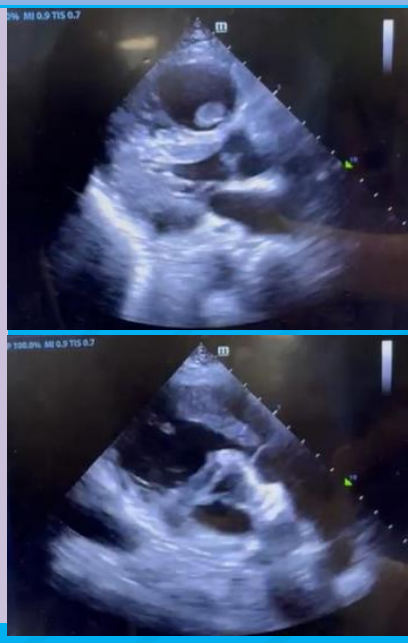
Introduction

Pulmonary embolism (PE) the third most common cardiovascular event. Our case highlights an unstable PE whom rapidly deteriorated post elective intubation.

Case Presentation

A 69-year-old woman with underlying myeloproliferative neoplasm, post 2 weeks of spinal laminectomy presented with 2 days of dyspnoea and 4 episodes of diarrhoea. Upon examination, patient is hypotensive 80/45 mmHg, HR 107 beats/min and Spo2 93% under room. Face mask oxygen was applied and her saturation improved. Lungs and abdominal examination was unremarkable. She was resuscitated with 2 pints of crystalloid. POCUS revealed dilated RA/RV, with clot in transit extending up till main pulmonary artery, distended IVC and 4-point compression test compressible. She was started on noradrenaline infusion. Patient is contraindicated for thrombolysis due to recent spinal intervention and she was referred to interventional radiology (IR) team for thrombectomy. Patient was electively intubated in operation theatre (OT) prior to thrombectomy. Patient developed cardiorespiratory arrest immediately post intubation.



Discussion

Larger clots in pulmonary artery (PA) can significantly raise the PA pressure, putting a strain to the right ventricle (RV) causes acute right heart failure. Echocardiography is useful to identify RV dysfunction, which is sufficient for reperfusion treatment in those with high index of suspicion for PE.[2] Intubation can be challenging due to risk of severe hypotension from induction and positive pressure ventilation (PPV).[2,3] PPV can worsen low cardiac output (CO) due to RV failure, thus PEEP should be applied with caution.[3] Thrombolysis can be administered in massive PE however clinicians have to consider bleeding risks.[1] Mechanical thrombectomy is performed if thrombolysis is contraindicated.[2]

Conclusion

This case highlights an atypical chief complaint of massive pulmonary embolism which we may potentially missed without the aid of bedside POCUS. The complexities of the case also shown us to approach pulmonary embolism thoughtfully and introducing positive point ventilation with caution. Small changes in management may change the course of outcome.

References

1. Ajah ON. Pulmonary Embolism and Right Ventricular Dysfunction: Mechanism and Management. Cureus [Internet]. 2024 Sep 30;16(9). Available from: https://pmc.ncbi.nlm.nih.gov/articles/PMC11443303/
2. Lim W, Tay TR. Approach to pulmonary embolism for frontline clinicians. Singapore Medical Journal [Internet]. 2024 Sep 1 [cited 2025 Apr 4];65(9):508–13. Available from: https://journals.lww.com/smj/fulltext/2024/09000/approach_to_pulmonary_embolism_for_frontline.6.aspx?context=latestarticles
3. Konstantinides SV, Meyer G, Becattini C, Bueno H, Geersing GJ, Harjola VP, et al. 2019 ESC guidelines for the diagnosis and management of acute pulmonary embolism developed in collaboration with the european respiratory society (ERS). European Heart Journal [Internet]. 2019 Aug 31;41(4):543–603. Available from: https://academic.oup.com/eurheartj/advance-article/doi/10.1093/eurheartj/ehz405/5556136